

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of claims

1 – 8. (Cancelled)

9. (Original) A wet suit for controlling the flow of water to maintain a desired skin surface temperature of a wearer, the wet suit comprising:

an outer layer; and

an inner layer comprising gel particles embedded in a matrix, the gel having a gel volume phase transition critical temperature (VPTCT) at about the desired skin surface temperature,

wherein the gel particles in the matrix absorb the fluid and expand to restrict flow when the temperature of the fluid is below the gel volume phase transition critical temperature and contract and expel the fluid to allow flow when the temperature of the fluid is above the gel volume phase transition critical temperature.

10. (Original) The wet suit of claim 9, wherein the matrix comprises a foam layer.

11. (Original) The wet suit of claim 9, wherein the outer layer comprises neoprene.

12. (Original) The wet suit of claim 9, further comprising a second inner layer inside of the inner layer, the second inner layer having a slick surface for contact with the wearer.

13. (Original) The wet suit of claim 9, further comprising a second outer layer outside of the outer layer.

14. (Original) The wet suit of claim 9, wherein the gel is a hydrogel having a VPTCT in the range of about 18°C to about 25°C.

15. (Original) The wet suit of claim 9, wherein the inner layer includes gel particles in an amount approximately 5% to 80% by weight of total dry weight of the matrix.

16. (Original) The wet suit of claim 9, wherein the gel particles comprise poly(N-isopropylacrylamide).
17. (Original) The wet suit of claim 16, wherein the gel particles contain a hydrophobic monomer.
18. (Original) The wet suit of claim 17, wherein the hydrophobic monomer is N-tert-butylacrylamide.
19. (Original) The wet suit of claim 9, wherein the VPTCT is about 18°C.
20. (Original) An article comprising:
 - an outer layer; and
 - an inner layer comprising gel particles embedded in a matrix, the gel having a gel volume phase transition critical temperature (VPTCT) at about the desired skin surface temperature,
 - wherein the gel particles in the matrix absorb the fluid and expand when the temperature of the fluid is below the gel volume phase transition critical temperature and contract and expel the fluid when the temperature of the fluid is above the gel volume transition critical temperature.
21. (Original) The article of claim 20 wherein the matrix is a foam matrix.
22. (Original) The article of claim 20 in the form of a web of material.
23. (Original) The article of claim 20 in the form of a tubular member.